-47-

CLAIMS

1. A fixing device, comprising:

two surface moving bodies, at least one of

which is driven so that the surface moving bodies

come in contact with each other, a nip is formed, and

surfaces of the surface moving bodies in contact move

in the same direction; and

a heat source configured to heat at least one of the surface moving bodies;

wherein a transfer medium having a surface where a non-fixed toner image is formed is put in the nip so that the toner image is heat-fixed on the transfer medium;

separation plate configured to remove the transfer medium, the transfer medium not being separated from the surface moving body after the transfer medium passes through the nip, from the surface moving body;

20 and

rise of temperature of a head end part, at a side of the surface moving body, of the separation plate is given priority over rise of temperature of other parts of the separation plate.

-48-

2. The fixing device as claimed in claim 1, wherein the separation plate has a structure where a heat capacity of the head end part, at the surface moving body side, of the separation plate is lower than a heat capacity of other parts of the separation plate.

3. The fixing device as claimed in claim 1,
wherein the separation plate includes a heat

10 conductivity limitation part configured to limit a
transfer of the heat at the surface moving body side
of the separation plate to other parts of the
separation plate.

4. The fixing device as claimed in claim 1, wherein the separation plate includes a reinforcing part configured to reinforce the head end part at the surface moving body; and

the reinforcing part faces a part of the

20 surface moving body, the part having a temperature
higher than a surface average temperature in an axial
direction of the surface moving body, in a position
facing the head end part at the side of the surface
moving body of the separation plate.

15

5

-49-

5. The fixing device as claimed in claim 4, wherein heating values of the heat source in an axial direction vary so that the temperature of the part of the surface moving body facing the reinforcing part is higher than a surface average temperature in the axial direction of the surface moving body.

5

15

20

6. The fixing device as claimed in claim 1,
wherein the reinforcing part is provided in
a position facing an end part of a conveyed transfer
medium.

7. The fixing device as claimed in claim 1,
wherein the separation plate includes a
water vapor receiving part configured to receive a
water vapor generated from a transfer medium; and
the water vapor receiving part is provided
in a position where water being condensed at the
water vapor receiving part does not drop onto the
head end part at the side of the surface moving body.

8. The fixing device as claimed in claim 7, wherein the water vapor receiving part is
25 provided in a position separated from the head end

-50-

part at the surface moving body away from a conveyance surface of the transfer medium.

9. The fixing device as claimed in claim 7,
wherein the water vapor receiving part is
made of a material having a low heat conductivity.

10. An image forming apparatus, comprising:

a toner image forming part configured to

10 form a toner image on a transfer medium; and

a fixing part configured to fix the toner

image to the transfer medium;

wherein the fixing part comprising:

two surface moving bodies, at least one of
which is driven so that the surface moving bodies

come in contact with each other, a nip is formed, and surfaces of the surface moving bodies in contact move in the same direction; and

a heat source configured to heat at least 20 one of the surface moving bodies;

15

wherein a transfer medium having a surface where a non-fixed toner image is formed is put in the nip so that the toner image is heat-fixed on the transfer medium;

25 the fixing device further comprises a

-51**-**

separation plate configured to remove the transfer medium, the transfer medium not being separated from the surface moving body after the transfer medium passes through the nip, from the surface moving body; and

rise of temperature of a head end part, at a side of the surface moving body, of the separation plate is given priority over rise of temperature of other parts of the separation plate.

10

25

5

11. The image forming apparatus as claimed in claim 10,

wherein the separation plate has a structure where a heat capacity of the head end part, at the surface moving body side, of the separation plate is lower than a heat capacity of other parts of the separation plate.

12. The image forming apparatus as claimed 20 in claim 10,

wherein the separation plate includes a heat conductivity limitation part configured to limit a transfer of the heat at the surface moving body side of the separation plate to other parts of the separation plate.

-52-

13. The image forming apparatus as claimed in claim 10,

wherein the separation plate includes a reinforcing part configured to reinforce the head end part at the surface moving body; and

5

10

20

the reinforcing part faces a part of the surface moving body, the part having a temperature higher than a surface average temperature in an axial direction of the surface moving body, in a position facing the head end part at the side of the surface moving body of the separation plate.

14. The image forming apparatus as claimed 15 in claim 13,

wherein heating values of the heat source in an axial direction vary so that the temperature of the part of the surface moving body facing the reinforcing part is higher than a surface average temperature in the axial direction of the surface moving body.

- 15. The image forming apparatus as claimed in claim 10,
- wherein the reinforcing part is provided in

-53-

a position facing an end part of a conveyed transfer medium.

16. The image forming apparatus as claimed
5 in claim 10,

wherein the separation plate includes a water vapor receiving part configured to receive a water vapor generated from a transfer medium; and

the water vapor receiving part is provided

in a position where water being condensed at the

water vapor receiving part does not drop onto the

head end part at the side of the surface moving body.

17. The image forming apparatus as claimed 15 in claim 16,

wherein the water vapor receiving part is provided in a position separated from the head end part at the surface moving body away from a conveyance surface of the transfer medium.

20

18. The image forming apparatus as claimed in claim 16,

wherein the water vapor receiving part is made of a material having a low heat conductivity.